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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,257	02/27/2004	Christian Joachim Keidel	APV31618A	1296

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Washington, DC 20036

EXAMINER

OMGBA, ESSAMA

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/787,257

Applicant(s)

KEIDEL ET AL

Examiner

Essama Omgba

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/10/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Anton (US Patent 5,236,525).

Anton discloses a method comprising providing an aluminum alloy sheet, forming the alloy sheet to a predetermined shaped structure and heat-treating the shaped structure, wherein heat-treating includes artificial ageing, see column 1, lines 66-68, column 2, lines 8-15 and column 3, lines 20-30.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anton.

Anton discloses a method as shown above except for the forming comprising cold forming. However it would have been obvious to one of ordinary skill in the art at the time the invention was made that shaping or forming by cold forming is an obvious

Art Unit: 3726

matter of design choice wherein no state problem is solved or unexpected results obtained in forming the shaped structure by cold forming versus hot forming as taught by Anton.

5. Claims 3, 5-10 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anton in view of Applicant's Admitted Prior Art (AAPA).

With regards to claim 3, Anton discloses a method as shown above. Although Anton does not disclose artificially ageing the shaped structure to a T6, T79, T78, T77, T76, T74, T73 or T8 temper condition, however it is known to age such structural components to such temper condition as attested by Applicant in paragraphs 2-9 and 23 to be known as AAPA. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have artificially aged the structure of Anton to the temper condition taught by, in order to improve its resistance to stress corrosion and exfoliation corrosion and improve its fracture toughness.

For claims 5-10, see paragraphs 5, 6 and 22 of the specification.

For claims 12-16, Applicant should note that it is within the general knowledge of one of ordinary skill in the art to provide the shaped structure with an appropriate pre-machining thickness that would satisfy the desired final thickness of the finished structure. Furthermore the heat-treatment disclosed by Anton would bring the distortion to an acceptable value.

6. Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anton in view of Quist et al. (US Patent 4,305,763).

Anton discloses a method as shown above except for the claimed composition of the aluminum alloy. However Quist et al. teaches a composition of aluminum alloy within Applicant's claimed range, see column 2, lines 4-18. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used an aluminum alloy with the claimed composition in the method of Anton since it has been held that "a prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness." *In re Peterson* 315 F.3d 1325, 1330, 65 USPQ 2d 1379, 1382-83 (Fed. Cir. 2003), see MPEP § 2144.05.

7. Claims 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anton in view of Bryans et al. (US Patent 6,973,815).

For claims 19-26, Anton discloses a monolithic aluminum structure that is part of an aircraft structure produced as shown above. Although Anton does not disclose the machining step and the structure as being a fuselage skin of an aircraft with stringers or integral reinforcements, however it is known to manufacture such aircraft fuselage skin with further machining as taught by Bryans et al., see column 2, lines 37-44, column 3, lines 16-27 and 50-67. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made finished machining the monolithic aluminum structure of Anton after forming, in light of the teachings of Bryans et al., in order to reduce distortion of the final formed structure. Regarding the recitation of the particular distortion target of less than 0.13 mm, Applicant should note that it is within the general knowledge of one of ordinary skill in the art to set acceptable working parameters for the

Art Unit: 3726

desired final product, and in as much as the claimed method and product are obvious over Anton/Bryans et al. as shown above, it would have been obvious to one of ordinary skill in the art that the claimed longitudinal distortion and lack of differing inner stress levels would be achieved by the method of Anton/Bryans et al. See also column 4, lines 46-50 of Anton.

For claims 28-32, Anton discloses a method comprising providing an aluminum alloy sheet, forming the alloy sheet to a predetermined shaped structure and heat-treating the shaped structure, wherein heat-treating includes artificial ageing, see column 1, lines 66-68, column 2, lines 8-15 and column 3, lines 20-30 and column 4, lines 44-45. Although Anton does not disclose machining the shaped structure, however it is known to form such integrated monolithic aluminum structures by machining the shaped structures as attested by Bryans et al., see column 2, lines 37-44, column 3, lines 16-27 and 50-67. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made finished machining the monolithic aluminum structure of Anton after forming, in light of the teachings of Bryans et al., in order to reduce distortion of the final formed structure.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Essama Omgba  
Primary Examiner  
Art Unit 3726